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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,370	01/12/2005	Yoshio Kajiya	OPS Case 666	2268
23474 7590 03/21/2007 FLYNN THIEL BOUTELL & TANIS, P.C. 2026 RAMBLING ROAD KALAMAZOO, MI 49008-1631			EXAMINER ECHELMMEYER, ALIX ELIZABETH	
			ART UNIT 1745	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/521,370

Applicant(s)

KAJIYA ET AL.

Examiner

Alix Elizabeth Echelmeyer

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed December 26, 2006. Claims 1-7 have been amended to further clarify the invention, but not to add additional limitations, so the rejection that follow is non-final. Claim 8 is new. Claims 1-8 are pending and are rejected for the reasons given below.

Claim Objections

2. The objections to claims 5-7 from the Office Action dated August 24, 2006 are withdrawn in light of the amendments.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. (US Pre-Grant Publication 2002/0197202) in view of Horowitz et al. (US Patent 4,101,716).

Fujino et al. teach a process for forming the active material for a positive electrode for a secondary battery (abstract).

Fujino et al. teach that the process involves the steps of:

- a. Providing a manganese oxide ([0028]).
- b. Adding lithium ions to the manganese oxide ([0034]).
- c. Putting the lithium manganese complex oxide in an alkali solution and coating the particles with cobalt from cobalt sulfate in solution ([0041], [0076]).
- d. Drying the mixture ([0042]).

Regarding claims 1-3, 5 and 8, the material that is produced by this process is a manganese oxide coated with cobalt and containing lithium.

Fujino et al. fail to teach the process in the exact order claimed in the instant invention. It would have been obvious to one having ordinary skill in the art at the time of the invention to change the sequence of adding ingredients in order to facilitate production. It has been held that it involve only routine skill in the art to select any order of performing process steps such as mixing ingredients. MPEP 2144.04 (IV C).

Fujino et al. fail to teach firing the dried mixture.

Horowitz et al. teach a firing process that removes impurities in mixed metal oxides (column 5 lines 1-6, 11-17).

It would be desirable to add a firing step as taught by Horowitz et al. to the method of Fujino et al. in order to remove impurities from the mixed metal oxide.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to add a firing step as taught by Horowitz et al. to the method of Fujino et al. in order to remove impurities from the mixed metal oxide.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. in view of Horowitz et al. as applied to claim 1 above, and further in view of Kumta et al. (US Patent 6,017,654).

The teachings of Fujino et al. and Horowitz et al. as discussed above are incorporated herein.

Fujino et al. in view of Horowitz et al. teach the disclosed method but fail to teach a cobalt oxide precipitated with Mn, Ni, Al, Mg or Ti.

As for claim 6, Kumta et al. teach a lithium cobalt oxide doped with magnesium (abstract, column 3 lines 46-65).

Regarding claim 7, teach a lithium nickel oxide doped with, for example, magnesium (abstract; column 4 lines 40-41).

Kumta et al. further teach that these materials improve cyclability and provide high voltage capacity as cathodes in lithium-ion secondary cells (abstract).

It would be desirable to use the materials of Kumta et al. in the process of Fujino et al. in view of Horowitz et al. since the end product would improve cyclability and provide high voltage capacity in cathodes in lithium-ion secondary cells.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use the materials of Kumta et al. in the process of Fujino et al. in view of Horowitz et al. since the end product would improve cyclability and provide high voltage capacity in cathodes in lithium-ion secondary cells.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alix Elizabeth Echelmeyer whose telephone number is 571-272-1101. The examiner can normally be reached on Mon-Fri 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's trainer, Susy N. Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alix Elizabeth Echelmeyer
Examiner
Art Unit 1745

aee


SUSY TSANG-FOSTER
PRIMARY EXAMINER